



DoD Executive Agent

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Assistant Secretary
of the Army
(Installations and
Environment)

Ecosystem Banking Best Practices

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Technology Transition – Supporting DoD Readiness, Sustainability, and the Warfighter

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Presentation Highlights

- Best Practices Study Objectives
- Preliminary Findings
 - Best Practices: Non-military
 - United States Army Context
- Conclusions



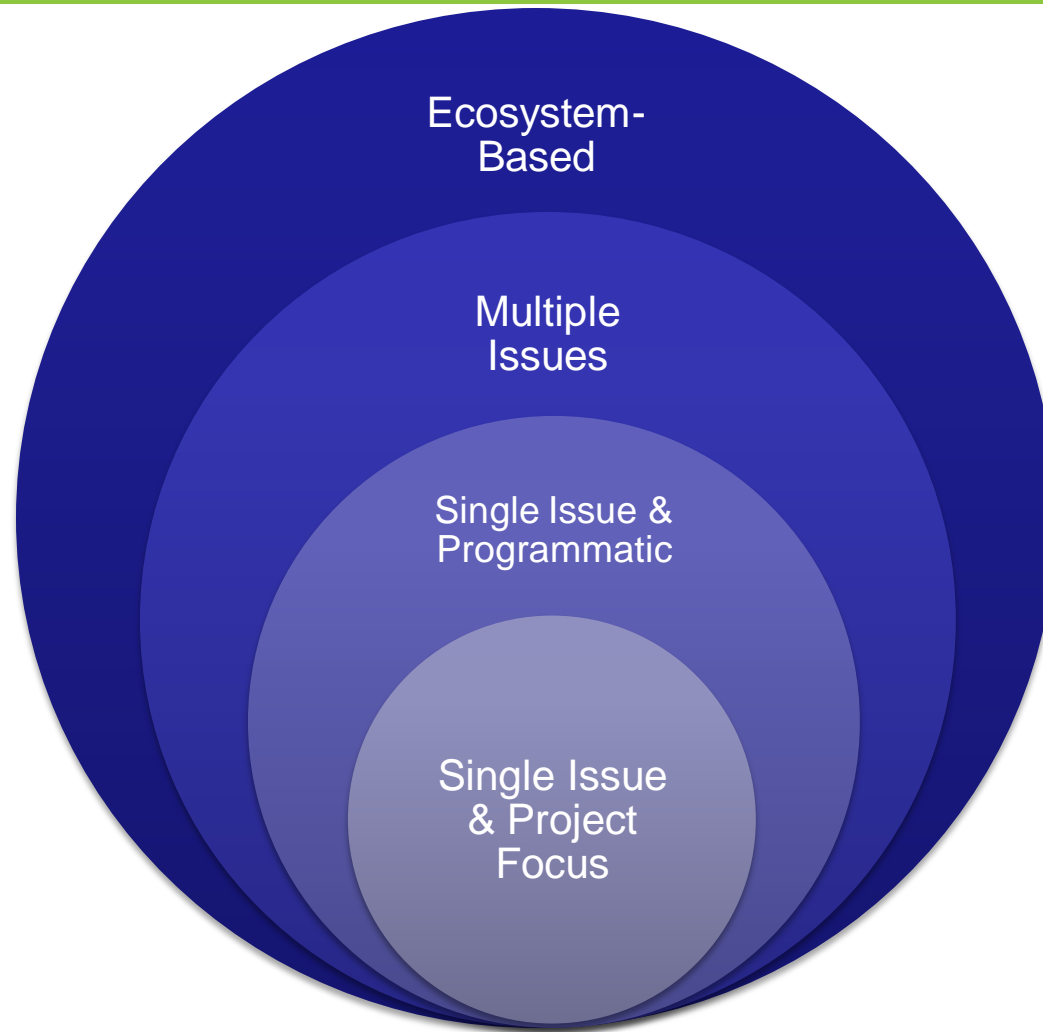
Study Objectives and Methods

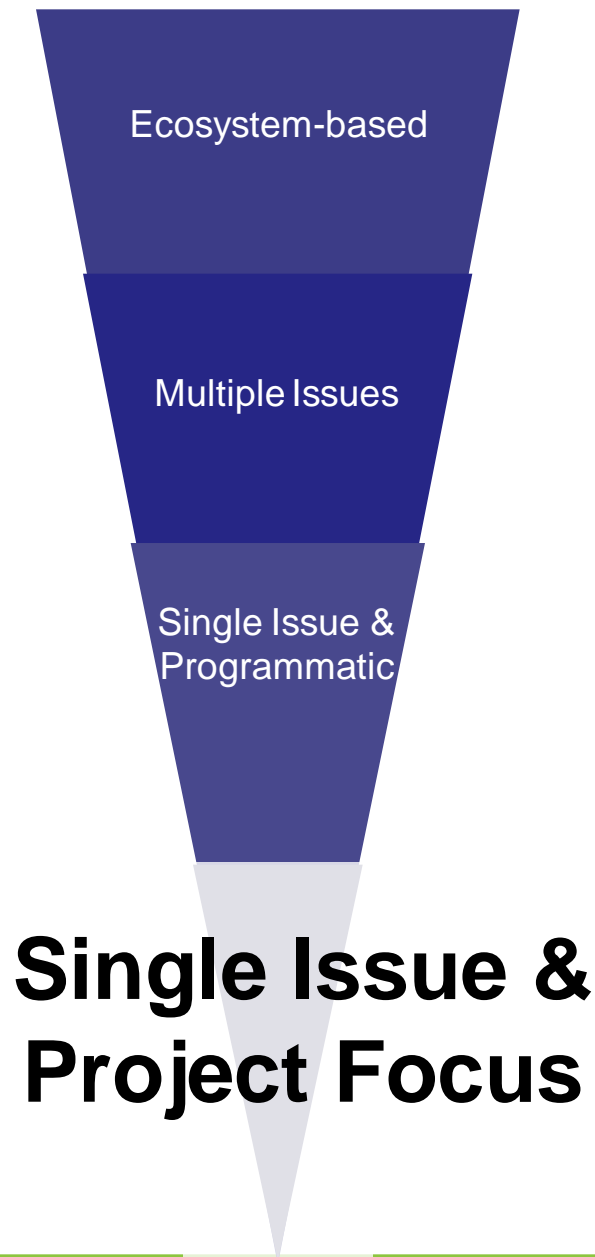
- How are other federal and state agencies meeting mitigation requirements?
- What are the benefits of using these approaches?
- What are important lessons learned?
- What can be transferred to the Army?
 - Current practice and context
- Literature review
 - Case selection
 - Case study follow-up
- Interviews with military subject matter experts
 - Case study visits

Best Case Sources

- Case Studies, Center for Environmental Excellence by the American Association of State Highway and Transportation Officials
- 2005 Status Report on Compensatory Mitigation in the United States, Environmental Law Institute, April 2006
- State Wetland Protection - Status, Trends, & Model Approaches, Appendix: North Carolina, Environmental Law Institute, 2008
- Banks and Fees – The Status of Off-Site Wetland Mitigation in the United States, Environmental Law Institute, 2002
- Federal Highway Administration (FHWA) Exemplary Ecosystem Initiatives, FHWA, 2006
- Results of the FHWA Domestic Scan of Successful Wetland Mitigation Programs, FHWA, December 2005
- 2009 Environmental Excellence Awards, FHWA
- National Cooperative Highway Research Program, Report 482, Guidelines for Selecting Compensatory Wetlands Mitigation Options, National Academy of Sciences - Transportation Research Board, 2002
- Success Stories in Transportation Enhancements, National Trails Training Partnership, Nature Conservancy, Revised November 2000

Approaches for Mitigation Banking





- Challenges of this approach continue to accumulate
 - Difficult to monitor
 - Inefficient/not cost effective
 - Poor ecological results
 - Often are not permanent
 - Internal capability/performance may not be sufficient
- Historically, lack of drivers for alternatives
- Includes project-by-project credit purchases

Case Selection: Relevance to the Army

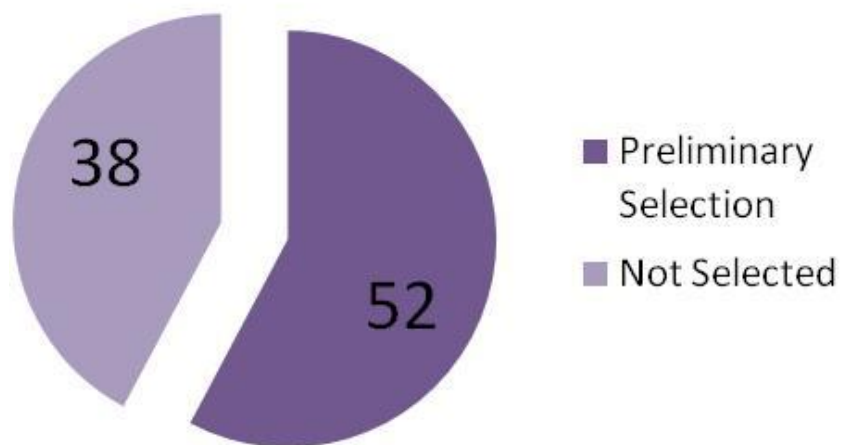
- Off-Site Banks
- Geographic locations across the United States
- Variation
 - Scale
 - Size
- Ecosystem issues similar to those of Army installations
 - Community development pressure
 - Habitat/endangered species
 - Multiple mitigation needs

Case Selection: Relevance to the Army

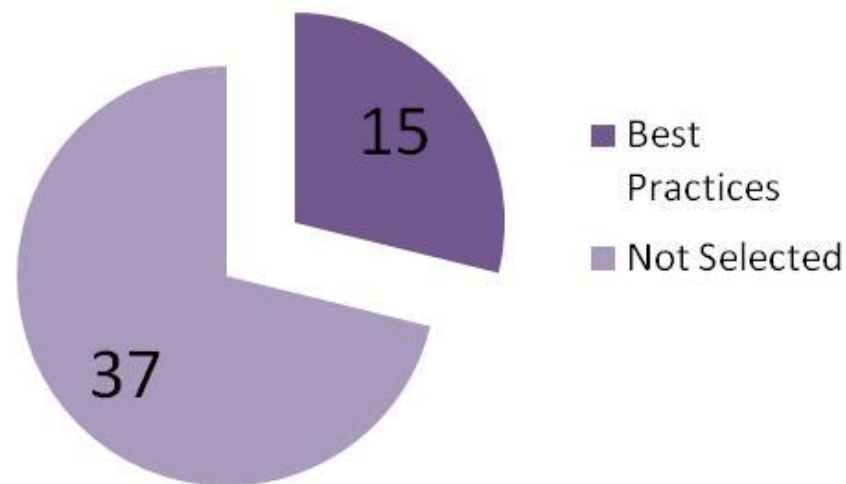
- Outcome criteria
 - Transfer compliance burden for mitigation to other entities
 - Utilize expertise for ecosystem management that the organization doesn't have
 - Achieve multiple mitigation credits or ecosystem-related objectives in a single bank
- Outcomes beyond mitigation objectives
 - Creation or maintenance of wildlife habitat
 - Recreation and other benefits to the community
 - Buffering and other benefits to adjacent preserves and wildlife management areas
 - Contribution to local and state ecosystem objectives
 - Creation of new partnerships with stakeholders

Selection of Best Practices

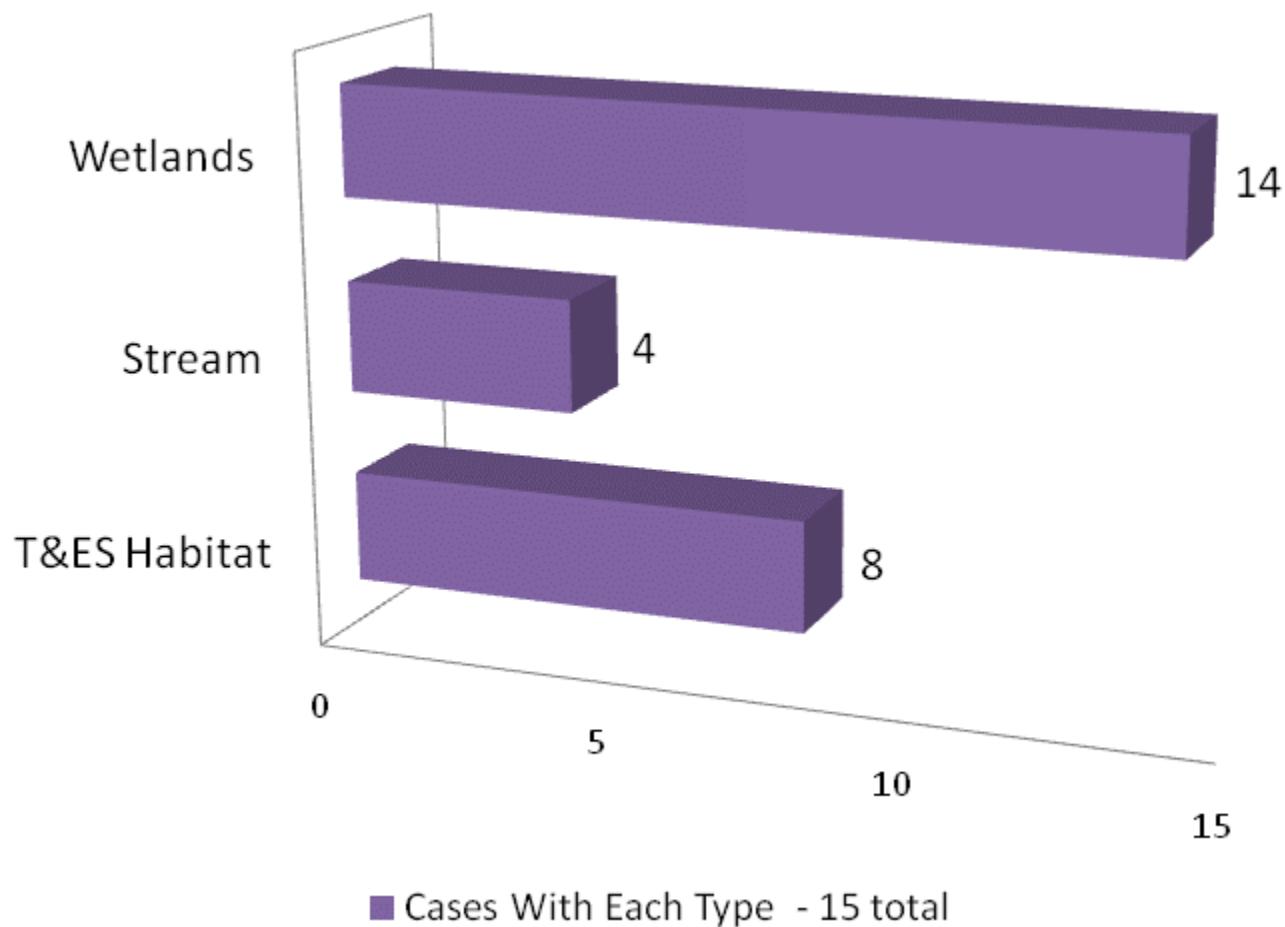
Preliminary - 52 of 90



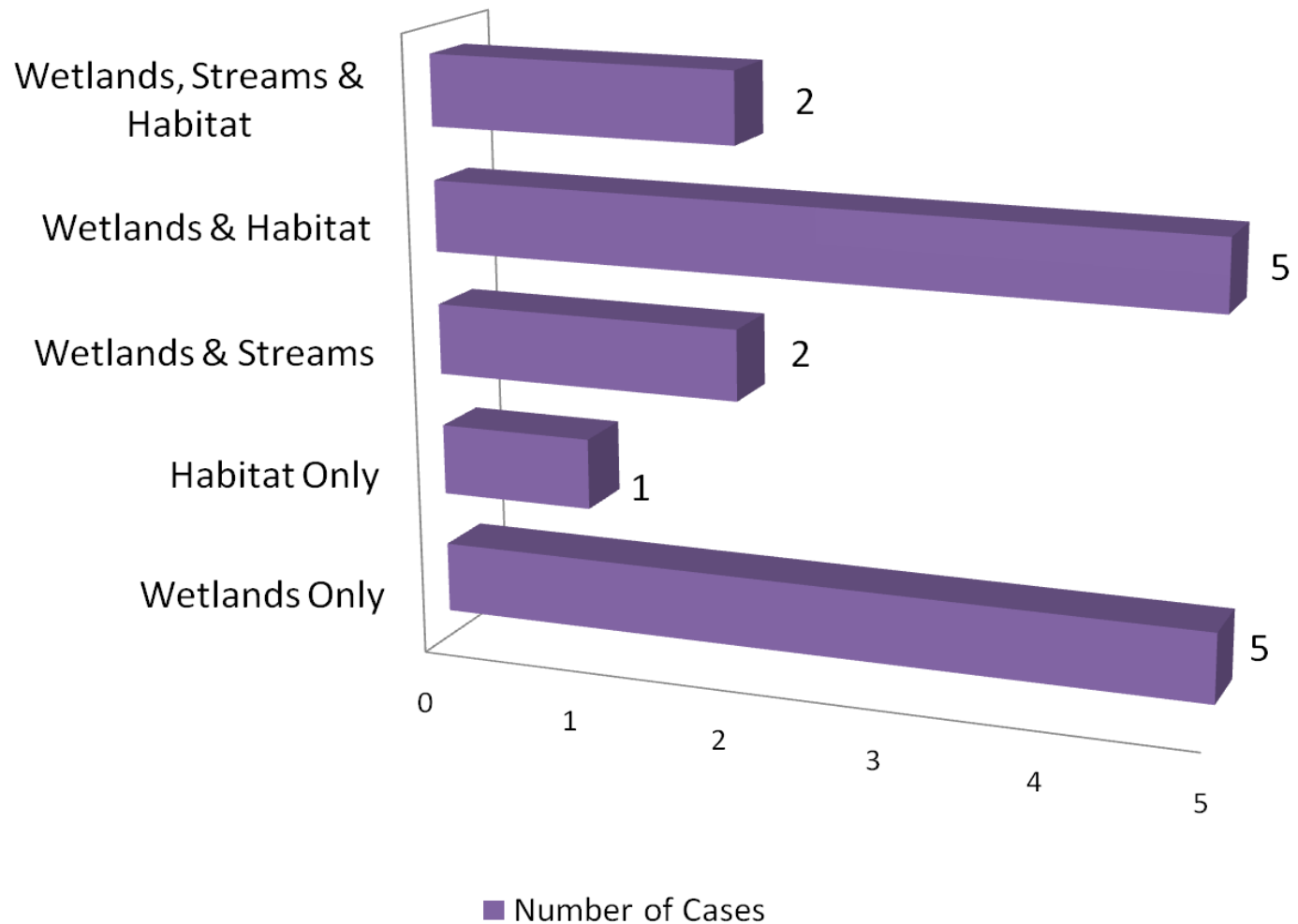
Final - 15 of 52

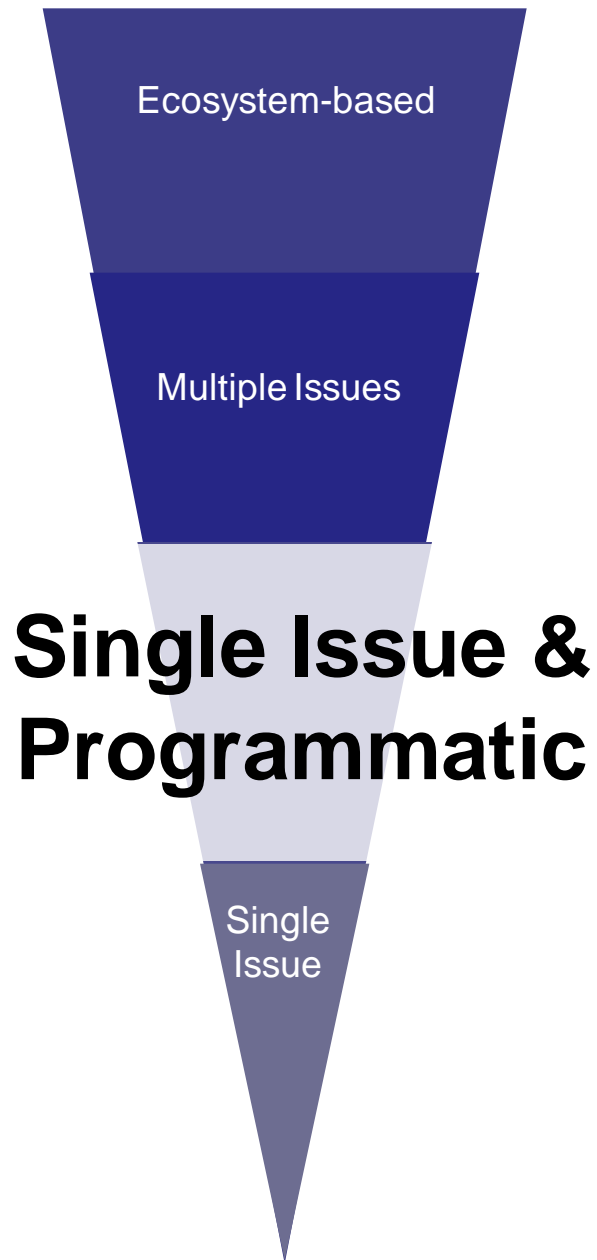


Types of Mitigation – Cases With Each



Types of Mitigation – Per Case





- Arkansas Highway and Transportation Department
 - Owns/manages banks, wetland focus
 - Partner agency administers banking
- Texas Department of Transportation
 - Owns/manages banks, wetland focus
 - Partner agency manages banking



- Alabama Department of Transportation
 - Two banks provide conservation credits
 - Has begun focus on stream mitigation
- North Carolina Department of Transportation
 - State-wide strategic effort to manage wetland and stream mitigation
 - Very high compliance for both issues
- Oregon Department of Transportation
 - Blends wetland program with habitat/species objectives
 - Banks currently produce both credits

Ecosystem -based

Multiple Issues

Single Issue &
Programmatic

Single
Issue

- County of San Diego
 - County-wide focus on native vegetation and habitat for many species
 - Many partners to integrate into planning activities across the county
 - Coordination between all bank and preserve owners and developers
- Florida Department of Transportation
 - Shifted to regional, multi-use mitigation
 - Many agencies work together for mutual benefits
 - Established large preservation corridors and mitigation “parks”

Findings to Date: Non-Military

- Drivers for innovation
 - Ecological ineffectiveness of traditional mitigation
 - Delays in completing mitigation
 - Lack of capability and/or performance in the organization
- Best practices
 - Establishing partners for significant roles or other benefits
 - Stacking or seeking multiple credits in banking projects
 - Utilizing an ecosystem-based approach
 - Allowing different approaches in a mitigation program
- Innovation was necessary, but results are not clear

Findings to Date: Army



Single Issue
& Project
Focus

- Regulatory mitigation requirements typically met on-post
- This practice cannot continue:
 - Concern about permanent restrictions on military lands
 - Continued pressure to natural resources due to changes in off-post land use

Findings to Date: Army

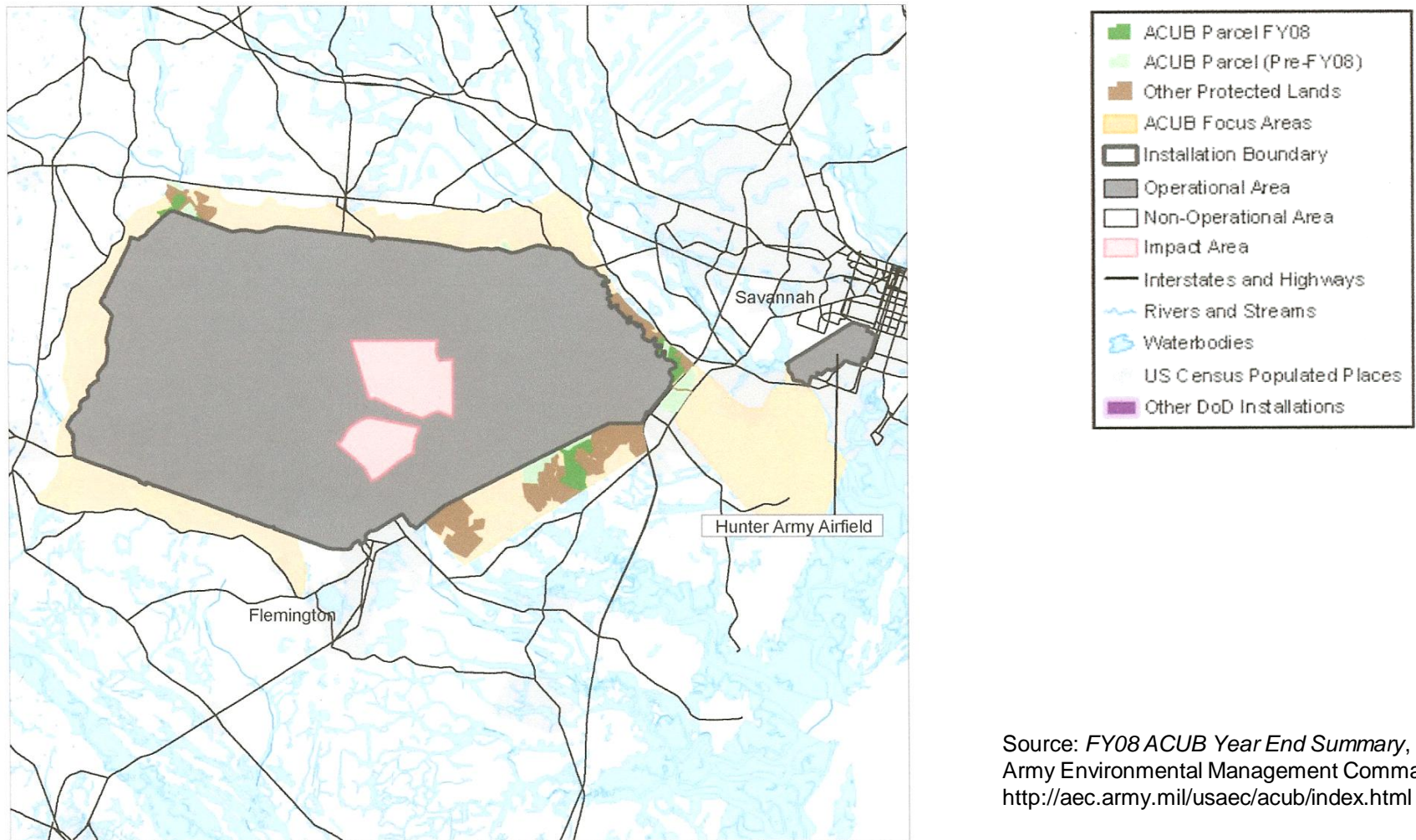
- Opportunities for off-site mitigation
 - Commercial banks
 - Partner-led banking on buffer lands
 - Easements and other land purchases
 - Recovery Credit Systems
- Challenges
 - Complexity
 - Field work to identify parcels and willing land owners
 - Project-driven focus
 - Funding

Opportunity: Partner-led Banking Army Compatible Use Buffer Program

- Mission-driven
 - Capability, capacity, accessibility
- Address encroachment concerns
 - Threatened & endangered species
 - Population growth and land use change
- Partners contribute funds
- Willing land owners



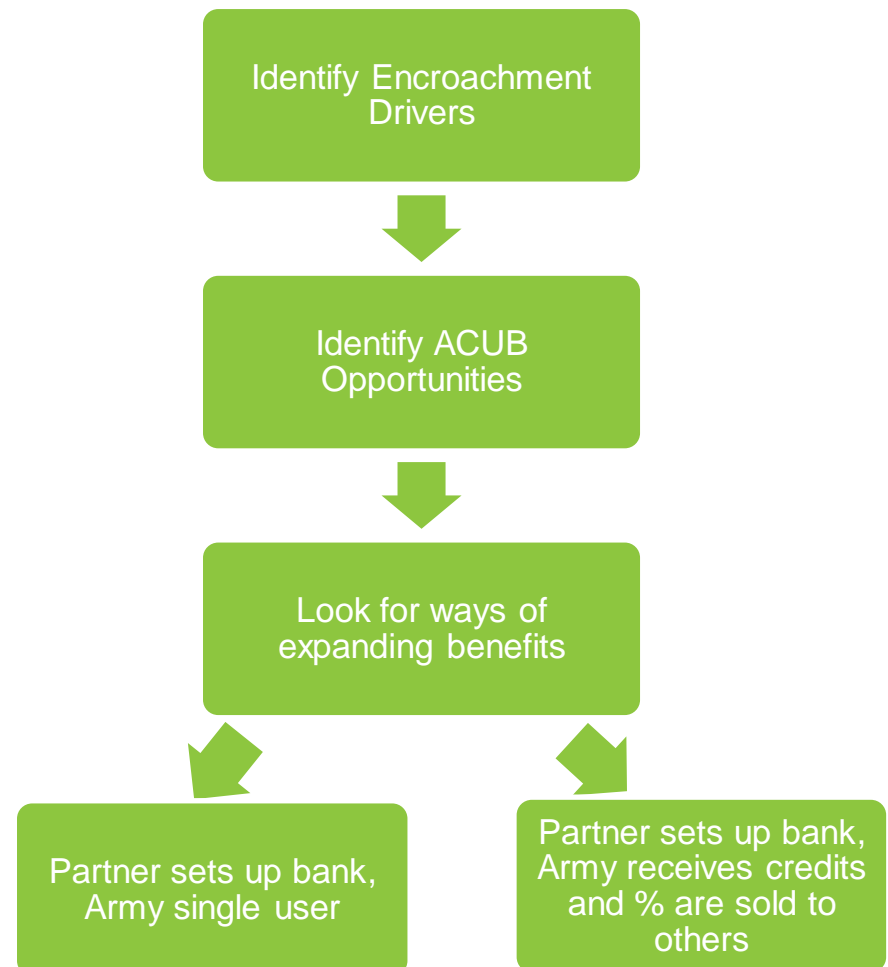
ACUB – Fort Stewart, Georgia



Source: *FY08 ACUB Year End Summary*,
Army Environmental Management Command
<http://aec.army.mil/usaec/acub/index.html>

Opportunities with ACUB

- Continue education internally and externally
- Look for opportunities for multiple benefits in each buffer transaction, even if they may not be needed today
 - Regulatory drivers, CWA, ESA, etc.
 - Before the deal is made!



Fort Benning ACUB

- Large number of military construction projects = need for wetland and stream mitigation credits
- Shortage of available credits from restoration (preferred)
- 400 acres ACUB conservation easement
- Mitigation credits established by preservation; sole source to Fort Benning
- Within impacted watershed – ecologically a “no brainer”
- Creative and innovative landowner working with existing partner – The Nature Conservancy
- Time and thought needed ahead of time when “layering” programs

Opportunity – Recovery Credit Systems

- Establish Credits
 - Identify threats to species and habitats
 - Identify action needed to address these threats
 - Only federal agencies
 - Only listed species
- Must provide a net benefit to the species
- Alternative to Conservation Banks
 - Ability to engage private land owners
- Temporary or Permanent depending on nature of impacts

Fort Hood RCS: Golden Cheeked Warbler

- Successful “proof of concept” demonstration
- Temporary credits apply to temporary impacts – permanent credits are needed for permanent impacts
- Engagement of private landowners in conservation
- Need to ensure adequate monitoring
- Working to ensure achieve a net benefit to the species
 - Management actions
 - Conservation metrics



Opportunities with RCS

- Potentially lower costs for mitigation
- Maximum flexibility to meet all possibilities where and when appropriate
- Still being developed and tested

**Price
per
Credit
?**



Fee-Simple
Acquisition

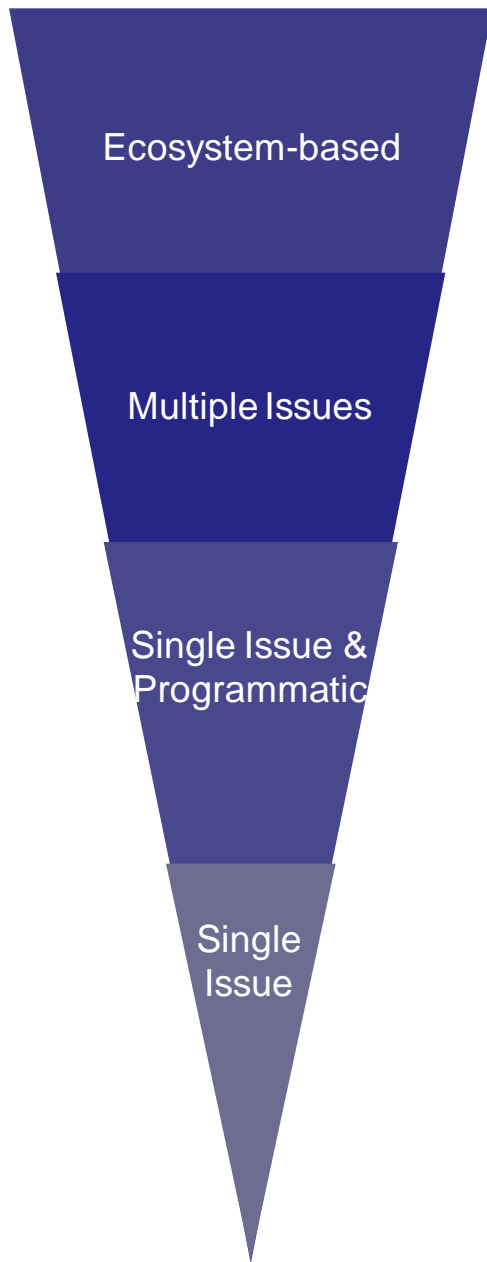
Conservation
Easements

Recovery Credit
Systems

Conclusion

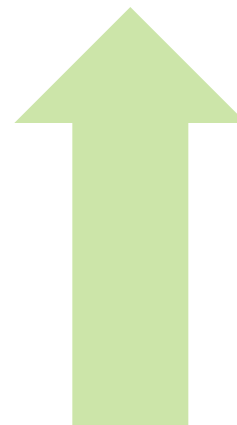
- When does it make sense?
 - Any time the military, community, and environment benefit
 - Management responsibility by partner
 - Meeting multiple objectives to increase return on investment
- More complexity: each base, each property, each property owner - all are unique
 - Equals more upfront investment
 - Solutions need to be flexible – what works best for the situation





Ecosystem-based, Future-oriented,
Landscape Scale, Partnering

More Time,
More Risk



More Options,
More Benefits

Clearly defined regulatory or
encroachment issue that must be
addressed



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